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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RALPH E. SIPPLE,
JAMES R. MCBREEN and MICHAEL F. STANTON

Appeal 2008-2225
Application 09/304,406¹
Technology Center 2600

Decided:² February 24, 2009

Before KENNETH W. HAIRSTON, JOHN A. JEFFERY,
and MARC S. HOFF, *Administrative Patent Judges*.

HOFF, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ The real party in interest is Unisys Corporation.

² The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

STATEMENT OF CASE

Appellants appeal under 35 U.S.C. § 134 from a Final Rejection of claims 1-25. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

Appellants' invention relates to a video on demand system that separates the tasks of supplying video to subscribers from the tasks associated with managing the subscriber interface. A first subsystem, called a video server, is dedicated to retrieving and transmitting the stream of video information. Virtually no other functions are performed by the video server. A second subsystem, called the transaction server, handles virtually all other functions including control interface with the subscribers, spooling of digitized video data, subscriber accounting, e-mail, facsimile, web access, etc. (Spec. 7).

Claim 1 is exemplary:

1. In a video on demand system for supplying video data to a plurality of subscriber receivers via a program delivery network, the improvement comprising:

- a. A data base storage system containing a plurality of video on demand programs;
- b. A temporary video storage memory;
- c. A transaction server directly coupled to said data base storage system, said temporary video storage memory, and said plurality of subscriber receivers whereby each of said plurality of subscriber receivers requests a different video on demand program from said transaction server and said transaction server spools said different video on demand programs from said data base storage to said temporary video storage memory; and

d. A plurality of video servers directly coupled to said transaction server and said temporary video storage memory and responsively coupled to said plurality of subscriber receivers via said program delivery network wherein said plurality of video servers are assigned by said transaction server to stream said spooled different video on demand programs from said temporary video storage memory to said plurality of subscriber receivers via said program delivery network.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Yurt	US 5,132,992	Jul. 21, 1992
Anderson	US 5,519,435	May 21, 1996
Baker	US 5,583,561	Dec. 10, 1996
Bennett	US 5,826,085	Oct. 20, 1998
Wilcox	US 6,678,891 B1	Jan. 13, 2004

Claims 1, 6, and 11-24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Baker in view of Yurt.

Claims 2-5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Baker in view of Yurt, Bennett, and Anderson.

Claims 7-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Baker in view of Yurt and Bennett.

Claim 25 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Baker in view of Yurt and Wilcox.

Rather than repeat the arguments of Appellants or the Examiner, we make reference to the supplemental Appeal Brief (filed February 15, 2007) and the Examiner's Answer (mailed July 5, 2007) for their respective details.

ISSUES

There are four principal issues in the appeal before us.

1. Did Appellants show that the Examiner erred in finding that Baker teaches a transaction server directly coupled to a data base storage system, temporary video storage memory, and a plurality of subscriber receivers?
2. Did Appellants show that the Examiner erred in finding that Baker in combination with Yurt teaches a plurality of video servers directly coupled to the transaction server and the temporary video storage memory?
3. Did Appellants show that the Examiner erred in finding that Baker teaches a transaction server that spools video on demand programs from the data base storage to the temporary video storage memory?
4. Did Appellants show that the Examiner erred in finding that Baker teaches a transaction server comprising a Unisys mainframe computer system?

FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

The Invention

1. According to Appellants, the invention concerns a video on demand system that separates the tasks of supplying video to subscribers from the tasks associated with managing the subscriber interface. A first subsystem, called a video server, is dedicated to retrieving and transmitting the stream of video information. Virtually no other functions are performed by the video server. A second subsystem, called the transaction server, handles virtually all other functions including control interface with the

subscribers, spooling of digitized video data, subscriber accounting, e-mail, facsimile, web access, etc. (Spec. 7).

Baker

2. Baker teaches the interactive delivery of digital video data on demand from a video library which is referenced by a digital video data server for real-time distribution to multiple display systems controlled by viewers (col. 1, ll. 11-14).

3. Baker teaches multiple video servers 12 coupled together in a network configuration (Fig. 3; col. 10, ll. 41-43).

4. Control server 54 performs load balancing between video servers (col. 10, ll. 49-52), enabling each video server to support the maximum number of events without having to expend processing time on administrative overhead (col. 10, ll. 54-56).

5. Baker teaches that control server 54 receives viewer requests, coordinates the access of multiple video servers to the video library and accumulates billing information (col. 10, ll. 57-60).

6. Baker teaches that its video server is composed of a Unisys 2200 series computer system (column 8, lines 43-48).

7. Baker teaches that commands to pause or rewind the video stream are handled by the *video* server software, rather than the transaction server (col. 12, ll. 10-17). Baker further teaches moving forward in a video stream, without specifically discussing what hardware element performs the function (col. 16, l. 6).

8. Baker teaches MPEG-2 encoding of its video programs (col. 7, ll. 10-12).

Yurt

9. Yurt teaches an audio/video distribution system in which the user controls the access and the playback operations of the selected material (col. 1, ll. 6-10).

10. Yurt teaches that means to access users may include “standard telephone, ISDN or B-ISDN, microwave, DBS, cable television systems, MAN [Metropolitan Area Network], high speed modems, or communication couplers” (col. 16, ll. 6-10).

Bennett

11. Bennett teaches object oriented interfaces for facilitating application program development in a networked computer system (col. 1, ll. 6-10).

Anderson

12. Anderson teaches a video data storage and retrieval system including a video signature computation arrangement for preventing an excessive instantaneous server data rate (col. 1).

Wilcox

13. Wilcox teaches a set of on-screen interface components which may be used in various combinations and arrangements to provide an easy-to-use consumer interface (col. 2, ll. 23-26).

PRINCIPLES OF LAW

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said

subject matter pertains.”” *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 127 S. Ct. 1727, 1734 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 127 S. Ct. at 1734 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”)

In *KSR*, the Supreme Court emphasized “the need for caution in granting a patent based on the combination of elements found in the prior art,” *id.* at 1739, and discussed circumstances in which a patent might be determined to be obvious. In particular, the Supreme Court emphasized that “the principles laid down in *Graham* reaffirmed the ‘functional approach’ of *Hotchkiss*, 11 How. 248.” *KSR*, 127 S. Ct. at 1739 (citing *Graham*, 383 U.S. at 12 (emphasis added)), and reaffirmed principles based on its precedent that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *Id.* The Court explained:

When a work is available in one form of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 1740. The operative question in this “functional approach” is thus “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.*

ANALYSIS

Claim 1

Appellants argue that the Examiner has failed to present a *prima facie* case of obviousness, in that: (a) Baker teaches the advantages of using a large mainframe computer as its video server; (b) the control server 54 of Baker cannot meet the claimed transaction server, because Baker teaches that spooling is accomplished by video server 12, and because Baker allegedly teaches that the control server “cannot handle video data;” and (c) Yurt cannot be relied upon to teach direct coupling of the plurality of video servers to the transaction server, because Yurt’s order processing and item data base 300 is “remote,” and Yurt allegedly teaches a dial-up connection between data base 300 and video servers 200 (Br. 20-23).

We are not persuaded by Appellants’ arguments. In arguing that Baker teaches in favor of a large mainframe video server, Appellants refer to column 6 (*sic*, column 4) of Baker. Baker’s discussion of a “high-performance enterprise server” (col. 4, ll. 11-16), however, corresponds to the embodiment illustrated in Figure 2, which uses a single video server. Baker, however, also teaches the embodiment illustrated in Figure 3, which includes multiple video servers 12 coupled together in a network configuration (FF 3). Control server 54 performs load balancing between video servers, enabling each video server to support the maximum number

of events without having to expend processing time on administrative overhead (FF 4).

Appellants cite column 10, lines 50-60 of Baker as allegedly “specifically disclaiming” that Baker’s control server handles any video. We have reviewed the cited section (as well as the rest of Baker), but cannot agree that Baker teaches that its control server “cannot” handle video data. The cited section merely discusses what functions control server 54 performs; there is no exclusion of video data mentioned. Baker teaches that control server 54 coordinates the access of multiple video servers to the video library (FF 5), and performs load balancing between video servers via selective distribution of service requests (FF 4). Baker therefore teaches that spooling of video on demand programs from data base storage (Baker’s “video library”) to temporary video storage memory (main storage unit 38 of each video server 12) occurs at the direction of control server 54; we thus agree with the Examiner that control server 54 meets the “spooling” limitation of claim 1.

We disagree with Appellants’ characterization of Yurt. The mere fact that Yurt’s data base 300 is labeled “REMOTE” is not, by itself, evidence that it cannot be directly coupled to reception systems 200. Further, we agree with the Examiner that Yurt’s connection method is not limited to dial-up. Yurt teaches that means to access users may include “standard telephone, ISDN or B-ISDN, microwave, DBS, cable television systems, MAN [Metropolitan Area Network], high speed modems, or communication couplers” (FF 10).

We therefore find no error in the Examiner’s rejection of claim 1 under 35 U.S.C. § 103.

Claim 6

Appellants argue, as with respect to claim 1 *supra*, that the Examiner’s rejection is erroneous because “control server 54 of Baker cannot access the video programs from the database storage system,” and because Yurt’s “‘remote’ element 300 is certainly not directly coupled to anything” (Br. 24-25). As explained above, we do not agree with Appellants’ position that Baker’s control server cannot access video programs. We further found above that Yurt does teach direct coupling of video servers, transaction server, and subscriber receivers.

Appellants further argue that Baker’s main storage unit 38 is located within video server 12, and thus is not directly accessible by control server 54 (Br. 24). This argument is not germane to the claimed invention, however, which requires merely that the transaction server be directly coupled to the temporary digital memory storage device, the transaction server spooling video programs into said temporary digital memory storage device. As explained *supra*, Baker in combination with Yurt teaches such direct coupling. We agree with the Examiner that the claim does not require the temporary memory to reside in the transaction server (Ans. 22). We further agree with the Examiner that because Baker’s control server 54 transmits a request to a database to load video programs into main storage 38, Baker meets the limitation of a transaction server that spools video programs into temporary memory (Ans. 22).

We therefore find no error in the Examiner’s rejection of claim 6.

Claims 11 and 12

Appellants argue that because claim 11 requires separate and distinct ““temporarily storing means,”” ““spooling means,”” and ““streaming means,”” Baker’s teaching of the performance of all those functions by a single video server 12 means that Baker cannot meet those limitations (Br. 25). Appellants’ argument is not persuasive because, as discussed *supra* with reference to claim 1, Baker teaches discrete temporary storing means (main storage 38), spooling means (control server 54), and streaming means (video server 12). Appellants’ further argument that Yurt does not teach the claimed direct coupling is also unpersuasive, as we discussed *supra* with respect to claim 1.

We do not find error in the Examiner’s rejection of claim 11, nor that of claim 12 not separately argued with particularity.

Claims 13 and 14

Appellants argue that the Examiner erred in rejecting claim 13 because the Examiner referred to Baker’s video server 12 (rather than control server 54) acting as a transaction gateway, and because, with reference to claim 2, the Examiner allegedly admitted that the combination of Baker and Yurt does not teach a transaction gateway (Br. 26-27). Appellants further argue that the Examiner erred in rejecting claim 14 because the Examiner referred to ““video server 54”” as the claimed identifying means that processes subscriber transactions (Br. 27).

We are not persuaded of Examiner error. With respect to claim 13, the Examiner in rejecting parent claim 11 correctly referred to Baker's control server 54 as the ““identifying means.”” Baker teaches that control server 54 receives viewer service requests, coordinates the access of multiple video servers to the video library, and accumulates billing information (FF 5), thus functioning as a ““transaction gateway.”” Appellants' argument with respect to the Examiner's handling of claim 2 is also unpersuasive, because claim 2 recites a transaction gateway *software module operating in a middleware environment*, whereas claim 13 recites only a “transaction gateway.””

With respect to claim 14, control server 54 of Baker processes subscriber transactions, such as supplying requested video and accumulating billing information (*Id.*).

We therefore do not find error in the Examiner's rejection of claims 13 and 14 under 35 U.S.C. § 103.

Claim 15

The Examiner states that Baker teaches that the claimed identifying means comprises a Unisys mainframe computer system (Ans. 8).

However, Baker teaches that its *video server* is composed of a Unisys 2200 series computer system (FF 6). This teaching does not meet the claim limitation because the identifying means in parent claim 11 corresponds to Baker's *control* server 54. The Examiner's argument that video server 12 may perform similar functions as control server 54 (Ans. 24) cannot substitute for a teaching that the control server comprises a Unisys mainframe computer.

Because the Examiner has failed to make out a *prima facie* case of obviousness, we find error in the Examiner’s rejection of claim 15 under 35 U.S.C. § 103.

Claim 16

Appellants assert error in the Examiner’s rejection because, in Appellants’ view, Baker explicitly teaches away from having the transaction server perform the claimed steps of ““determining”” and ““assigning”” (Br. 28). Although Appellants refer to having explained this point of view “above in detail” (*Id.*), we cannot find any such explanation in Appellants’ Brief. Neither do we agree that Baker explicitly teaches away from having the transaction server determine one of a plurality of video programs, or assign one of a plurality of video servers.

Therefore, because Appellants have failed to establish any error in the Examiner’s rejection, we affirm the Examiner’s rejection of claim 16 under 35 U.S.C. § 103.

Claims 17-20

Each of these dependent claims further limits the transaction server. Claims 17-19 recite, respectively, pausing, reversing, or fast-forwarding streaming video in response to a signal from a subscriber to the transaction server. Claim 20 recites performing subscriber accounting to enable billing a subscriber for a video on demand request.

Baker teaches, however, that commands to pause or rewind the video stream are handled by the *video* server software, rather than the transaction server (FF 7). Baker further teaches moving forward in a video stream, without specifically discussing what hardware element performs the function (*Id.*). Because the pertinent section of Baker also mentions a viewer's rewind request, we interpret Baker as teaching that the video server also handles fast-forward commands.

Baker teaches that one of the functions of control server 54 (which the Examiner analogizes to the claimed transaction server) is the accumulation of billing information (FF 5), thus meeting claim 20's recitation of performing subscriber accounting.

Because we find that Baker teaches pause, rewind, and fast-forward functions being performed by the video server 12, rather than the control server 54, we find error in the Examiner's rejection of claims 17-19. Because we find that Baker teaches performing subscriber accounting, we do not find error in the Examiner's rejection of claim 20.

Claim 21

Appellants argue that Baker does not teach a software controlled transaction server spooling one of a plurality of video programs because Baker allegedly teaches that video server 12 both spools and streams the programs, and because Baker does not mention any software for control server 54 (Br. 30).

We are not persuaded by Appellants' arguments. As discussed *supra*, we concur in the Examiner's position that Baker's control server is effective to control the spooling of video programs from mass storage device(s) to main storage unit 38, thus meeting the "spooling" limitation. Further, we concur in the Examiner's finding that control server 54 of Baker is inherently software controlled (Ans. 24).

We therefore find no error in the Examiner's rejection of claim 21 under 35 U.S.C. § 103.

Claims 22-24

Appellants argue that the Examiner's rejection is erroneous because Baker teaches that video programming data is handled only by video server 12 (Br. 31). As discussed *supra* with respect to claim 1, we are not persuaded by this argument because we do not agree that Baker teaches what Appellants allege.

We therefore find no error in the Examiner's rejection of claim 22 under 35 U.S.C. § 103, nor that of claims 23 and 24 not separately argued with particularity.

Claim 2

Appellants argue that the Examiner's proffered motivation to combine the references, to enable "applications on different machines to be seamlessly interconnected," lacks support because Baker teaches the advantages of using a single mainframe computer to perform all video handling functions (Br. 33); that because Baker teaches the use of a single mainframe, it would not be appropriate to use the PC of Anderson as a low cost video server (Br. 33); and that Bennett teaches a video on demand service but shows no VOD server, as is claimed (Br. 34).

Appellants' arguments are not considered persuasive. As discussed *supra* with respect to claim 1, Baker teaches an embodiment (shown in Figure 3) that uses multiple video servers 12, whose loads are balanced by control server 54 (FF 3, 4). The existence of multiple video servers provides ample motivation to combine Baker, Yurt, and Bennett in the manner asserted by the Examiner, and further to employ the PC of Anderson as a low cost video server in a multiple server environment (Ans. 25). We also concur in the Examiner's position that, in the context of the asserted combination, Yurt and Baker teach servers to provide VOD data to a requesting device in order to run a VOD service such as disclosed by Bennett, thus teaching every element of claim 2 (Ans. 26).

We therefore find no error in the Examiner's rejection of claim 2 under 35 U.S.C. § 103.

Claims 3-5

Claim 3 recites "a mainframe computer platform hosting said transaction server." The Examiner states that Baker teaches such a mainframe (Ans. 14). However, the section of Baker cited by the Examiner teaches that Baker's *video* server is composed of a Unisys mainframe computer (FF 6). Baker contains no teaching that its control server (which the Examiner analogizes to the claimed transaction server) comprises a mainframe computer. We therefore find error in the Examiner's rejection of claim 3, as well as that of claims 4 and 5 dependent therefrom, under 35 U.S.C. § 103.

Claims 7 and 8

Appellants assert error in the Examiner's rejection of claim 7 because, Appellants argue, the Examiner points to functions that the Baker reference associates with its video server 12, rather than control server 54 which the Examiner analogizes to the claimed transaction server (Br. 36). We are not persuaded by Appellants' argument, however, because Baker teaches that its control server receives viewer service requests and accumulates billing information (FF 5), thus meeting claim 7's requirement that "each of said plurality of subscribing receivers is charged for corresponding ones of said plurality of service requests."

We therefore find no error in the Examiner's rejection of claim 7, nor that of claim 8 not separately argued with particularity, under 35 U.S.C. § 103.

Claim 9

Appellants argue error in the Examiner's rejection because the Examiner allegedly ascribes functions to the transaction server which Baker actually performs via the video server, and because Baker does not disclose spooling by the transaction server (Br. 37). Appellants' arguments are not persuasive because, contrary to Appellants' assertions, claim 9 does not depend from claim 8, nor does claim 9 further limit the transaction server. As pointed out by the Examiner, Baker does teach MPEG-2 encoding of its video programs (FF 8), thus meeting the claim.

Because Appellants have failed to identify any error in the Examiner's rejection under 35 U.S.C. § 103, we affirm the rejection.

Claim 10

The Examiner asserts that Baker teaches a transaction server (control server 54) comprising a Unisys computer system (Ans. 16). As discussed *supra*, however, Baker teaches only that its *video* server may comprise a Unisys mainframe computer (FF 6).

The Examiner’s rejection of claim 10 under 35 U.S.C. § 103 is thus erroneous, and we reverse the rejection.

Claim 25

Appellants argue that the Examiner failed to make out a *prima facie* case of obviousness in that the Examiner provided only motivation to make the combination, rather than evidence or reasoning showing such motivation (Br. 38).

We disagree with Appellants’ characterization of the rejection. The Examiner noted that Baker in combination with Yurt teaches all the elements of the claimed invention except for a request to the transaction server for the delivery of pizza; observed that Wilcox supplies the missing teaching, in the context of a user interface for interactive television; and concluded that the skilled artisan would have been motivated to make the combination so as to be able to order pizza without making a telephone call (Ans. 16-17).

Because Appellants have failed to identify any error in the Examiner’s rejection of claim 25 under 35 U.S.C. § 103, we affirm the rejection.

CONCLUSIONS OF LAW

Appellants have not shown that the Examiner erred in finding that Baker teaches a transaction server directly coupled to a data base storage

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system, temporary video storage memory, and a plurality of subscriber receivers.

Appellants have not shown that the Examiner erred in finding that Baker in combination with Yurt teaches a plurality of video servers directly coupled to the transaction server and the temporary video storage memory.

Appellants have not shown that the Examiner erred in finding that Baker teaches a transaction server that spools video on demand programs from the data base storage to the temporary video storage memory.

Appellants have shown that the Examiner erred in finding that Baker teaches a transaction server comprising a Unisys mainframe computer system.

ORDER

The Examiner's rejection of claims 1, 2, 6-9, 11-14, 16, and 20-25 is affirmed. The Examiner's rejection of claims 3-5, 10, 15, and 17-19 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

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